We claim:

1. A substantially water-resistant ink jet recordable substrate coating composition comprising:
   a. an aqueous polyurethane dispersion;
   b. a cationic nitrogen-containing polymeric dye fixative compound; and
   c. an acrylic polymer,
   wherein said coating composition has a pH of 7 or less.

2. The coating composition of claim 1 wherein said polyurethane dispersion is chosen from anionic polymers, cationic and nonionic polyurethanes dispersible in water.

3. The coating composition of claim 1 wherein said polyurethane dispersion comprises a polyisocyanate and a polyol.

4. The coating composition of claim 1 wherein said polyurethane dispersion contains from 1 weight percent to less than 70 weight percent of polyurethane.

5. The coating composition of claim 1 wherein said cationic nitrogen-containing polymeric dye fixative compound has a pH of 7 or less.

6. The coating composition of claim 1 wherein said cationic nitrogen-containing polymeric dye fixative compound comprises an aqueous mixture containing from 5 weight percent to 50 weight percent or less of a nitrogen-containing polymer.

7. The coating composition of claim 1 wherein said cationic nitrogen-containing polymeric dye fixative compound comprises polyamine and epichlorohydrin.

8. The coating composition of claim 1 wherein said acrylic polymer comprises a cationic acrylic polymer.

9. The coating composition of claim 8 wherein said cationic acrylic polymer is chosen from polyacrylates,

polymethacrylates, polyacrylonitriles and polymers having monomer types selected from acrylonitrile, acrylic acid, acrylamide and mixtures thereof.

10. The coating composition of claim 8 wherein said cationic acrylic polymer has a number average molecular weight of from 1500 to 8150.

11. The coating composition of claim 10 wherein said cationic acrylic polymer has a number average molecular weight of from 2900 to 7125.

12. The coating composition of claim 1 wherein said composition comprises from 20 to 75 weight percent of said aqueous polyurethane dispersion, from 5 to 75 weight percent of said cationic nitrogen-containing polymeric dye fixative compound, and from 1 to 75 weight percent of said acrylic polymer, based on total weight of said coating composition.

13. A method of preparing a substantially water-resistant ink jet recordable substrate coating composition comprising the step of mixing a nitrogen-containing polymeric dye fixative compound with an aqueous polyurethane dispersion and an acrylic polymer to produce a substantially homogeneous mixture having a pH of 7 or less.

14. The coating composition of claim 13 wherein said polyurethane dispersion is chosen from anionic polymers, cationic and nonionic polyurethanes dispersible in water.

15. The coating composition of claim 13 wherein said polyurethane dispersion comprises a polyisocyanate and a polyol.

16. The coating composition of claim 13 wherein said polyurethane dispersion contains from 1 weight percent to less than 70 weight percent of polyurethane.

17. The coating composition of claim 13 wherein said cationic nitrogen-containing polymeric dye fixative compound has a pH of 7 or less.

18. The coating composition of claim 13 wherein said cationic nitrogen-containing polymeric dye fixative compound comprises an aqueous mixture containing from 5 weight percent to 50 weight percent or less of a nitrogen-containing polymer.

19. The coating composition of claim 13 wherein said acrylic polymer comprises a cationic acrylic polymer.

20. The coating composition of claim 19 wherein said cationic acrylic polymer is chosen from polyacrylates, polymethacrylates, polyacrylonitriles and polymers having monomer types selected from acrylonitrile, acrylic acid, acrylamide and mixtures thereof.

21. The coating composition of claim 19 wherein said cationic acrylic polymer has a number average molecular weight of from 1500 to 8150.

22. The coating composition of claim 21 wherein said cationic acrylic polymer has a number average molecular weight of from 2900 to 7125.

23. The coating composition of claim 13 wherein said composition comprises from 20 to 75 weight percent of said aqueous polyurethane dispersion, from 5 to 75 weight percent of said cationic nitrogen-containing polymeric dye fixative compound, and from 1 to 75 weight percent of said acrylic polymer, based on total weight of said coating composition.

24. A substantially water-resistant ink jet recordable substrate at least partially coated with a coating composition comprising:

a. an aqueous polyurethane dispersion;

b. an aqueous solution of a cationic nitrogen-containing polymeric dye fixative compound; and

c. an acrylic polymer,

wherein said coating composition has a pH of 7 or less.

25. The coating composition of claim 24 wherein said polyurethane dispersion is chosen from anionic polymers, cationic and nonionic polyurethanes dispersible in water.

26. The coating composition of claim 24 wherein said acrylic polymer comprises a cationic acrylic polymer.

27. The coating composition of claim 26 wherein said cationic acrylic polymer is chosen from polyacrylates, polymethacrylates, polyacrylonitriles and polymers having monomer types selected from acrylonitrile, acrylic acid, acrylamide and mixtures thereof.

28. The coating composition of claim 24 wherein said composition comprises from 20 to 75 weight percent of said aqueous polyurethane dispersion, from 5 to 75 weight percent of said cationic nitrogen-containing polymeric dye fixative compound, and from 1 to 75 weight percent of said acrylic polymer, based on total weight of said coating composition.

29. The ink jet recordable substrate of claim 24 wherein said substrate comprises a cellulosic-based paper.

30. The ink jet recordable substrate of claim 24 wherein said substrate comprises a microporous material.

31. The ink jet recordable substrate of claim 24 wherein said substrate comprises a matrix containing polyolefin; a siliceous filler; and a porous structure.

32. The ink jet recordable substrate of claim 31 wherein said substrate has a porosity of at least 35 percent by volume of said substrate.

33. The ink jet recordable substrate of claim 31 wherein said polyolefin is chosen from polyethylene, polypropylene and mixtures thereof.

34. The ink jet recordable substrate of claim 33 wherein said polyethylene comprises a linear high molecular weight polyethylene having an intrinsic viscosity of at least 10 deciliters/gram and said polypropylene comprises a linear high molecular weight polypropylene having an intrinsic viscosity of at least 5 deciliters/gram.

35. The ink jet recordable substrate of claim 31 wherein said siliceous filler is chosen from silica, mica, montmorillonite, kaolinite, asbestos, talc, diatomaceous earth, vermiculite, natural synthetic zeolites, cement, calcium silicate, aluminum silicate, sodium aluminum silicate, aluminum polysilicate, alumina silica gels, glass particles and mixtures thereof.

36. The ink jet recordable substrate of claim 35 wherein said siliceous filler is chosen from precipitated silica, silica gel or fumed silica.

37. The ink jet recordable substrate of claim 24 wherein said coating composition is applied to said substrate such that said substrate has a coating thickness of from 1 to 40 microns.

38. The ink jet recordable substrate of claim 24 further comprising bonding said substrate to at least one layer of a substantially nonporous material.

39. The ink jet recordable substrate of claim 38 wherein said substantially nonporous material is chosen from substantially nonporous thermoplastic polymers, substantially nonporous metalized thermoplastic polymers, substantially nonporous thermoset polymers, substantially

nonporous elastomerics, substantially nonporous metals, and mixtures thereof.

40. A method of preparing an at least partially coated substantially water-resistant ink jet recordable substrate comprising the steps of:

a. providing an ink jet recordable substrate having at least one side;

b. providing a coating composition comprising an aqueous polyurethane dispersion, an aqueous solution of a cationic nitrogen-containing polymeric dye fixative compound and an acrylic polymer; and

c. at least partially applying said coating composition to at least one side of said ink jet recordable substrate.

41. The method of claim 40 wherein said polyurethane dispersion is chosen from anionic polymers, cationic and nonionic polyurethanes dispersible in water.

42. The method of claim 40 wherein said acrylic polymer comprises a cationic acrylic polymer.

43. The method of claim 42 wherein said cationic acrylic polymer is chosen from polyacrylates, polymethacrylates, polyacrylonitriles and polymers having monomer types selected from acrylonitrile, acrylic acid, acrylamide and mixtures thereof.

44. The method of claim 40 wherein said composition comprises from 20 to 75 weight percent of said aqueous polyurethane dispersion, from 5 to 75 weight percent of said cationic nitrogen-containing polymeric dye fixative compound, and from 1 to 75 weight percent of said acrylic polymer, based on total weight of said coating composition.

45. The method of claim 40 wherein said substrate comprises a cellulosic-based paper.

46. The method of claim 40 wherein said substrate comprises a microporous material.

47. The method of claim 40 wherein said substrate comprises a matrix containing polyolefin; a siliceous filler; and a porous structure.

48. The method of claim 47 wherein said substrate has a porosity of at least 35 percent by volume of said substrate.

49. The method of claim 47 wherein said polyolefin is chosen from polyethylene, polypropylene and mixtures thereof.

50. The method of claim 49 wherein said polyethylene comprises a linear high molecular weight polyethylene having an intrinsic viscosity of at least 10 deciliters/gram and said polypropylene comprises a linear high molecular weight polypropylene having an intrinsic viscosity of at least 5 deciliters/gram.

51. The method of claim 47 wherein said siliceous filler is chosen from silica, mica, montmorillonite, kaolinite, asbestos, talc, diatomaceous earth, vermiculite, natural synthetic zeolites, cement, calcium silicate, aluminum silicate, sodium aluminum silicate, aluminum polysilicate, alumina silica gels, glass particles and mixtures thereof.

52. The method of claim 51 wherein said siliceous filler is chosen from precipitated silica, silica gel or fumed silica.

53. The method of claim 40 wherein said coating composition is applied to said substrate such that said substrate has a coating thickness of from 1 to 40 microns.

54. The method of claim 40 further comprising bonding said substrate to at least one layer of a substantially nonporous material.

55. The method of claim 54 wherein said substantially nonporous material is chosen from substantially nonporous thermoplastic polymers, substantially nonporous metalized

thermoplastic polymers, substantially nonporous thermoset polymers, substantially nonporous elastomerics, substantially nonporous metals, and mixtures thereof.

56. The method of claim 40 further comprising the step of drying the coated ink jet recordable substrate by applying a temperature of from ambient to 350°F.

57. A coated microporous substrate comprising:

a. a microporous substrate having an upper surface and a lower surface comprising:

(i) a polyolefin;

(ii) a siliceous filler;

(iii) a porosity such that pores constitute at least 35 percent by volume of said microporous substrate; and

b. a coating at least partially applied to at least one surface of said microporous substrate, said coating comprising:

(i) at least one polyurethane chosen from anionic polyurethanes, cationic polyurethanes, nonionic polyurethanes, and mixtures thereof;

(ii) a polymeric nitrogen-containing dye fixative compound; and

(iii) an acrylic polymer.

58. A multilayer article comprising an ink jet recordable substrate at least partially connected to a substantially nonporous material, said ink jet recordable substrate at least partially coated with a substantially water-resistant coating composition.

59. The multilayer article of claim 58 further comprising a friction-reducing coating composition wherein at least one of said ink jet recordable substrate and substantially

nonporous material is at least partially coated with said friction-reducing coating composition.

60. The multilayer article of claim 58 wherein said substantially water-resistant coating composition comprises:

a. an aqueous polyurethane dispersion;

b. a cationic nitrogen-containing polymeric dye fixative material; and

c. an acrylic polymer,

wherein said coating composition has a pH of 7 of less.

61. A method for producing a multilayer article comprising the steps of:

a. providing an ink jet recordable substrate having a top surface and a bottom surface;

b. providing a substantially water-resistant coating composition comprising a stable dispersion of:

(i) an aqueous polyurethane dispersion;

(ii) a cationic nitrogen-containing polymeric dye fixative material; and

(iii) an acrylic polymer;

c. at least partially applying said coating composition to at least one surface of said ink jet recordable substrate;

d. at least partially connecting said ink jet recordable substrate of (c) to a substantially nonporous material having a top surface and a bottom surface;

e. providing a friction-reducing coating composition; and

f. at least partially applying said friction-reducing coating composition to at least one surface of at least one of said ink jet recordable substrate and said substantially nonporous material.

62. A substantially water-resistant ink jet recordable substrate coating composition comprising:

a. an aqueous polyurethane dispersion;

b. a cationic nitrogen-containing polymeric dye fixative compound; and

c. a cationic acrylic polymer,

wherein said coating composition has a pH of 7 or less.

63. A multilayer article comprising an ink jet recordable substrate, at least one substantially nonporous material and a magnetizable material.

64. The multilayer article of claim 63 wherein said magnetizable material is an oxide material.

65. The multilayer article of claim 64 wherein said oxide material is selected from ferrous oxide, iron oxide, and mixtures thereof.

66. The multilayer article of claim 63 wherein said magnetizable material is in a slurry.

67. The multilayer article of claim 63 wherein said magnetizable material has a coercivity of from 200 to 5000.

68. The multilayer article of claim 63 wherein said magnetizable material is at least partially connected to at least one material selected from a protective material, a carrier material or an adhesive material.

69. The multilayer article of claim 68 wherein said protective material is selected from polyethylene teraphthalate, polyester and combinations thereof.

70. The multilayer article of claim 68 wherein said carrier material is selected from polyethylene teraphthalate, polyester and combinations thereof.

71. The multilayer article of claim 68 wherein said adhesive material is selected from polyvinyl acetate, starches, gums, polyvinyl alcohol, animal glues, acrylics, epoxies, polyethylene-containing adhesives, and rubber-containing adhesives.

72. The multilayer article of claim 68 wherein said protective material is at least partially connected to said magnitizable material, said magnetizable material is at least partially connected to said carrier material, and said carrier material is at least partially connected to said adhesive material.

73. The multilayer article of claim 63 wherein said magnetizable material is at least partially connected to said ink jet recordable substrate.

74. The multilayer article of claim 63 wherein said magnetizable material is at least partially connected to said substantially nonporous material.

75. The multilayer article of claim 63 wherein said ink jet recordable substrate is a microporous substrate.

76. The multilayer article of claim 63 wherein said substantially nonporous material is polyvinyl chloride.

77. The multilayer article of claim 63 wherein said magnetizable material is at least partially coated with a substantially water-resistant coating composition.

78. The multilayer article of claim 77 wherein said substantially water-resistant coating composition is the coating composition of claim 1.

79. The multilayer article of claim 77 wherein at least one surface of said ink jet recordable substrate is at least partially coated with a substantially water-resistant coating composition.

80. The multilayer article of claim 77 wherein at least one surface of said substantially nonporous material is at least partially coated with a substantially water-resistant coating composition.

81. The multilayer article of claim 63 wherein at least one surface of said magnetizable material is at least partially coated with a friction reducing coating composition.

82. The multilayer article of claim 81 wherein said friction reducing coating composition further comprises at least one lubricant and at least one resin.

83. The multilayer article of claim 81 wherein said ink jet recordable substrate is at least partially coated with a friction reducing coating composition.

84. The multilayer article of claim 81 wherein said substantially nonporous material is at least partially coated with a friction reducing coating composition.

85. The multilayer article of claim 63 further comprising a release liner at least partially connected to at least one surface of said multlayer article.

86. A multilayer article comprising a microporous substrate at least partially connected to a first substantially nonporous material; said first substantially nonporous material at least partially connected to a second substantially nonporous material; said second substantially nonporous material at least partially connected to a third substantially nonporous material; said third substantially nonporous material comprising a magnetizable material.

87. A multlayer article comprising a magnetizable material at least partially connected to an adhesive material and said adhesive material at least partially connected to a substantially nonporous material.

88. A multilayer article comprising a magnetizable material at least partially connected to an adhesive material and said adhesive material at least partially connected to an ink jet recordable material.

89. A multilayer article comprising a magnetizable material, an ink jet recordable substrate and a substantially nonporous material wherein said ink jet recordable substrate is at least partially coated with a substantially water-resistant coating

composition, and at least one of said ink jet recordable substrate and substantially nonporous material is at least partially coated with a friction-reducing coating composition.

90. A multilayer article comprising an ink jet recordable substrate, at least one substantially nonporous material and a data transmittance/storage device.

91. The multilayer article of claim 90 wherein said data transmittance/storage device comprises a carrier material.

92. The multilayer article of claim 91 wherein said carrier material is polyvinylchloride.

93. The multilayer article of claim 90 wherein said data transmittance/storage device comprises a barrier material.

94. The multilayer article of claim 93 wherein said data transmittance/storage device can be at least partially connected to said barrier material using an adhesive material.

95. The multilayer article of claim 93 wherein at least one surface of said barrier material is at least partially coated with a coating composition selected from a substantially water-resistant coating composition, or a friction reducing coating composition or a combination thereof.

96. The multilayer article of claim 93 wherein said barrier material comprises a substantially nonporous material.